FACE INVESTIGATION

SUBJECT: Laborer Dies Following a 13-foot Fall From a Porch-Roof

SUMMARY: A 66-year-old male laborer (the victim) died of injuries he received after falling 13 feet from the roof of a porch. The victim was part of a seven-person crew that was washing windows and installing storm windows on a student residence building at a state university. The storm windows were being installed at the second story level directly above the porch roof. The victim was standing on the porch roof while installing the windows, and a co-worker was providing assistance from the ground level. The co-worker was standing on the stair steps of the porch handing the victim a storm window when the incident occurred. It is assumed that when the victim leaned over the edge of the roof and grasped the window he lost his balance and fell to the ground striking his head on the concrete sidewalk. The co-worker ran inside the dormitory and had a resident call 911. The emergency medical service (EMS) arrived and found the victim bleeding from the nose and mouth, with shallow and labored breathing, and unconscious. The EMS transported the victim to the local hospital where he died approximately 12 hours later. The Wisconsin FACE investigator concluded that, to prevent similar occurrences, employers should:

! **develop, implement, and enforce a written safety program which includes, but is not limited to, worker training in recognizing, avoiding, or abating hazards such as working on a roof with an unguarded roof perimeter**

! **provide fall protection measures along unguarded roof perimeters**

! **conduct a job safety analysis**

! **conduct scheduled and unscheduled safety inspections at each worksite to ensure that safety procedures are being followed.**

INTRODUCTION: On October 2, 1993, a 66-year-old male laborer (the victim) died after falling 13 feet from a porch roof on October 1, 1993. The Wisconsin FACE investigator was notified by the state's safety manager from Department of Administration, Bureau of state Risk Management. On October 18, 1993, the WI FACE field investigator conducted an investigation of the incident. The incident was reviewed with the victim's supervisor and the state's safety manager. Photographs of the incident site were taken, and the coroner and police reports were obtained.

The employer in this incident is a campus site, founded in 1849, of a state university system. Over 14,000 people work at this campus, with twenty employees in the classification of special laborer for window cleaning (the victim's job title). On the day of the incident, the victim was working with six other laborers and a supervisor at the incident site. The employer had provided window cleaning services at the site for 43 years in the spring and fall when storm and screen windows needed to be changed. The building was constructed in 1856,is registered as a historic site, and has the original windows in place. The laborers did this work at other campus sites throughout the entire year, using a variety of procedures at different

worksites to accommodate buildings of different heights and window types.

An employer safety program is managed and directed at several levels of administration. The safety director who is responsible for the safety program at the victim's worksite also has responsibility for environmental and safety factors at other worksites. The formal safety program did not include written safe work procedures for changing the storm windows
at this worksite. The victim's supervisor worked directly with the seven-person crew wherever their work assignments led them, but he was also responsible for another crew that worked at other sites. The supervisor conducted informal safety discussions at the worksites that included worker and supervisor suggestions for safe work procedures. The victim was a member of a union that participates in regular labor/management meetings. There was no specific committee to deal with worker safety issues, so these topics were discussed at the general labor/management meetings.

The employer provides on-the-job training for laborers when they are hired, and to refresh work skills. The training for cleaning and changing storm windows at this worksite was also provided on-site, and reflected a procedure that had been developed by the workers over years of doing this same task at the worksite. The victim had worked for 27 years as a laborer, and was classified as a laborer-special at the time of the incident. He had performed this procedure with the work crew in other years. This was the seventh fatality that the employer had experienced since 1974, and the first to result from a fall.

INVESTIGATION: The employer was in the process of providing regular seasonal maintenance to a number of buildings throughout the college campus. The maintenance included, but was not limited to, washing the windows and installing storm windows wherever applicable.

On the day of the incident, the victim and six other workers were assigned various duties at a student residence building. The victim and another worker were assigned to install a number of wooden framed (70-inch long by 30-inch wide, and weighing about 15 pounds each) storm windows throughout the dormitory. Work had progressed without incident until about 12:40 p.m. At that time, the victim and co-worker had just finished lunch and returned to the job site to continue their duties. The victim climbed an extension ladder to access the porch roof while the co-worker remained on the ground. The porch roof was flat, covered with a tin roofing material, about 8-feet wide by 16-feet long and was 13-feet to ground level.

At the time of the incident, the victim was standing near the edge of the roof waiting for the co-worker to hand him a storm window from the ground. The co-worker picked up a storm window and stood on the stair steps leading to the porch deck. The co-worker held the window up toward the victim, and the victim bent over to reach the window. As the victim grasped the window, he apparently lost his balance and began to fall. Although unable to substantiate, the victim appears to have partially fallen/jumped from the porch roof and struck the concrete sidewalk about 9 ½-feet away from the base of the porch deck. The co-worker witnessing what had occurred, ran inside the dormitory and had a resident call 911. The emergency medical service (EMS) arrived and found the victim bleeding from the nose and mouth, with shallow and labored breathing, and unconscious. The EMS transported the victim to the local hospital where he died approximately 12 hours later.

CAUSE OF DEATH: The coroner's report listed the cause of death as brain hemorrhage.

RECOMMENDATIONS/DISCUSSION:

Recommendation #1: Employers should develop, implement, and enforce a written safety program which includes, but is not limited to, worker training in recognizing, avoiding, or abating hazards such as working on a roof with an unguarded roof perimeter edge.

Discussion: In this incident, the victim was working on a roof with an unguarded roof perimeter edge and ultimately fell from the roof which resulted in his death. Employers should evaluate tasks performed by workers, identify all potential hazards, and then establish, implement and enforce a written safety program addressing these issues. The safety program should include, but not be limited to, training in safe work practices including the evaluation of work areas prior to beginning work and the implementation of appropriate control measures.

Recommendation #2: Employers should provide fall protection measures along unguarded roof perimeters.

Discussion: A porch roof was being used as the work area for the installation of storm windows. Employers should use an appropriate fall protection system, or combination of applicable systems (e.g., warning lines, guardrails, platforms, safety belts, nets, safety monitoring systems, etc.) to protect employees from falling off the edge of roofs. In this case, an eye bolt could have been anchored to the building and a safety belt and lanyard used in conjunction with the eye bolt.

Recommendation #3: Employers should conduct a job safety analysis.

Discussion: A job safety analyses is that method by which a job is made safe and efficient by the identification of hazards or potential incidents related to each step of the job, and the development of solutions for each existing hazard to eliminate or control those conditions which allow for a potential incident. The hazard of handling the storm windows from the ground level to the porch roof could have been eliminated by carrying the windows into the dormitory and through the room designated for window replacement/installation.

Recommendation #4: Employers should conduct scheduled and unscheduled safety inspections at each worksite to ensure that safety procedures are being followed.

Discussion: To be effective, a safety program must be enforced at the worksite. Safety inspections demonstrate to workers that the company is committed to enforcing its safety policies and procedures. Therefore, employers should conduct scheduled and unscheduled safety inspections at each worksite and ensure that safety procedures are being followed.